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AURORA BOREALIS.

We comply with the request of a subscriber in pub lishing the following article—which gives a more detailed account than we have seen, of those remarkable lights which were witnessed in this city in 1827 and 1828.

MR. EDITOR—

The frequent appearance of these lights during the summer and autumn of 1827, so unusual in our latitude, is probably within your recollection. Those which were seen in August of that year, exceeded in splendour any thing of the kind witnessed within the memory of the oldest observer. They were slightly noticed in our papers at the time; but not with that attention which the extraordinary character of the occurrence seemed to demand. The account which I enclose you, is taken from a New York paper, and is from the pen of a gentleman, distinguished for the accuracy of his observation, and the fidelity of his description; and is much more minute and precise, than any other I have met with. I should be glad to see it preserved in something less fugitive than the pages of a daily journal, and although it may not fall exactly within the plan of your work, I should be much obliged by its insertion. These phenomena have always been viewed with interest by men of science, and their causes have furnished much matter of speculation to the learned; and the northern navigators and travellers acting under the orders of the British government, have I believe been directed to notice and report upon them particularly. It would not be inappropriate to your meteorological columns; and, I think, would be interesting to many of your readers.

A SUBSCRIBER.

January 12, 1829.

[From the N. Y. Commercial Advertiser.]

AURORA BOREALIS.

The Aurora Borealis, or Northern Light, which is very common in high latitudes, and rare in latitude forty-one, was seen from the city of New York, and many other parts of the United States, in great splendour, on the nights of Monday and Tuesday, the 27th and 28th of August. For the gratification of those who did not see it on either night, or the bright arch which passed over the city on Tuesday night, and for the information of those who may be disposed to speculate upon the causes of these interesting phenomena, I propose to describe their appearance, and to give a brief account of the weather immediately before and after. On Saturday the 25th of August, the wind was North Easterly, the sky cloudy, and the air cool, and there were strong indications of an approaching North East storm. Early on Sunday morning it commenced raining, and rained very heavily on Sunday and Monday. The wind was fresh on Sunday, but could scarcely be called a gale. In the afternoon of Monday the wind backed round to the West of North, and it cleared off. Early in the evening, thick clouds, the remnants of the materials of the storm, were seen floating in the West, from North to South, a few degrees above the horizon. The moon went down, at eighteen minutes past nine o'clock, and a few minutes after, the sky in the north appeared very bright, as if illumined by a distant fire. I immediately went to the third story window of a very elevated building on the west side of Broadway, and from a window saw a very extraordinary light in the north. To obtain if possible a still better view of it, I proceeded immediately to the roof of the house, an elevation of about ninety feet above the street, which enabled me to overlook the whole city, and afforded a clear view of the horizon in every direction. From this situation was seen a broad band of light, in the form of a long low arch, stretching round from five to six points of the compass, and extending in the centre a few degrees above the horizon, and the north star directly over the centre of it. Immediately under the arch, and apparently extending from the horizon to the under part of it, there was a pretty dark thick cloud. In this arch, and immediately under it, on the upper part of the dark cloud where the arch and cloud seemed to touch each other, were two remarkably bright spots; one near the eastern, and the other near the western extremity of the arch; and from those spots, a large quantity of bright light, of a circular form, seemed to issue and to rise to a small distance above the arch. Shortly after, similar spots of bright light appeared, at various distances from one another, all along the arch, and from these the light seemed to issue, and to rise to various heights above the arch.

About 11 o'clock a new appearance presented itself. A number of perpendicular bright white columns or pillars, apparently several degrees in length, were seen in quick succession, moving horizontally and apparently directly over the arch from the eastern to the western extremity of it. These columns or pillars, were wholly invisible until they came within the range of the arch or its light, and disappeared the moment they passed it. Upon reflection I was inclined to think that these columns or pillars were vapour in that form, driven along or over the arch by a current of wind and illumined by the bright light of the arch, or of the light which produced the arch, as they came and passed within its range. The brightness immediately above the western extremity of the arch, and in that part of the heavens where these columns had disappeared, seemed to me to become more vivid immediately afterwards. Not long after these columns or pillars had disappeared, the dark cloud beneath the arch seemed to be rising, and by half past eleven o'clock, or thereabouts, had covered the arch, and had spread over a considerable part of the northern section of the sky, and in a short time afterwards was driven by the wind to the south east, and the arch again appeared as bright as before. Some time after this, the horizon beneath the arch again became darkened as before, and another dark cloud seemed to occupy the place of that which had risen and been dispersed.

About half-past twelve o'clock, there was another and a very extraordinary display—a row of pillars of extreme beauty and brightness appeared all at once standing along or on the the arch, extending apparently from five to ten degrees above it. They appeared to be at equal distances from one another, but of unequal heights. This colonnade remained for one or two minutes and vanished.

Shortly afterwards, bright spots again appeared in the arch, as in the former part of the night, and from which large quantities of bright light seemed to issue, and to extend, as before, to unequal heights above the arch. These appearances continued in greater or less degrees of magnitude and brilliancy, until the light of day intermingled with the light of the Aurora; and the light of the North was lost in the light of the East, or ceased to be distinguishable from it.

There may have been some other displays of it which were not seen by me; but, as I was very anxious to see an Aurora Borealis, and watched its appearances, with some intermissions of a few minutes, from half-past nine o'clock until broad day light in the morning, it is not probable that any very interesting displays of it escaped my attention.

This Aurora appears to have been seen all over the Northern and Eastern section of the United States, where the storm had entirely ceased, and the weather permitted—and was most probably seen all over the Northern section of this continent, unless prevented by the state of the weather—but it does not appear to have been noticed in the newspapers, and probably was not seen south of Baltimore.

The North-east storm appears to have commenced and terminated much earlier, and to have been much more violent in the South than in the North; to have been of nearly the same duration in most places, and to have extended more than a thousand miles along the Atlantic sea board of the United States, and several hundred miles into the interior of the country.

On Tuesday night, at half past nine o'clock, I again ascended to the roof of the same building from which I had viewed the Aurora Borealis on Monday night. In the north, there was a broad band of light, in the form of an arch, very similar to that which was seen the night before, and the position and colour of the arch were nearly the same, except that it appeared to stretch about one point farther to the east and west, and may have extended from six to seven points of the compass, and the light was less bright than that of Monday night. The north star appeared to be directly over the centre of it. Immediately over the arch, and a few degrees above it, there was another arch of nearly the same form, but not very bright. I at first supposed that these arches might have some connexion with the moon, which was then about half an hour high; and shining pretty brightly; but after the moon had set, I observed no other change than that both the arches appeared brighter than before it went down, and the upper arch had risen a little higher than it was when I first saw it; and I then supposed the light of the upper arch might be produced by the light of the lower. The upper arch continued to move slowly from north to south, inclining a little to the east, and as it moved towards New York, it seemed of course to rise and to extend to the east and to the west, until the centre of the arch became vertical to New York. At this time, the eastern limb appeared to me to pass over Long Island, a little to the north of Brooklyn, and to extend nearly to the eastern horizon, and the western limb to pass over New Jersey, a little to the south of Powles Hook, and to extend nearly to the western horizon. The arch seemed to remain in this situation a short time, then passed our zenith, and was shortly after broken, dissolved, and disappeared. After this arch had risen to a considerable height, and extended its limbs to the east and west, its brightness was greatly increased, and it became an object of great beauty, and its novelty attracted general attention; but when its centre reached the zenith, and its extremities extended nearly to the eastern and western horizon. and it stood suspended under the blue and spangled vault of heaven, across the bright arch of the milky way, it became an object of supreme beauty and of universal admiration; a more beautiful and magnificent spectacle cannot be conceived.

In the progress of this arch through the sky, there were several changes in its appearance, and some circumstances connected with it which deserve to be noticed. A considerable time before it became vertical to us the limbs seemed to have become narrower, and much more dense than the centre of it; and small perpendicular columns of light seemed to be moving horizontally under the arch, from its eastern towards its western limb. Some time afterwards, there appeared to be a row of small perpendicular pales or panels of bright light nearly under but not attached to the arch. These pales, or panels, were at equal distances from one another, but of unequal heights, decreasing regularly from the centre of the arch towards its western limb; and they appeared to be moving horizontally and slowly from the centre towards the western limb of the arch, and as they disappeared the western limb appeared to become more dense and brighter. Shortly before this the ends of the arch seemed to have a spiral motion, and to have become twisted into the form of a roll, and about the time the centre of the arch became vertical to us, the whole arch, from one extremity to the other, assumed the appearance of a great roll, and appeared to increase in brightness. About the time it assumed this appearance it passed our zenith, and shortly after the eastern end of it seemed to unfold itself, and spread, and melt away; and then the centre unfolded and melted away in a similar manner, leaving the western limb very bright, the largest end uppermost, and greatly resembling an inverted column or cone. It remained in this situation a few minutes, the upper end gradually inclining more to the south than the lower end, and soon after it seemed to unfold and to float off in small patches, and melt away as the other parts of it had done. While the centre of the arch was nearly vertical to New York, there was a bright path or streak of light stretching a considerable distance across the North river, immediately under the arch, and similar to the reflected light of the moon, when in its first or last quarter, and a few degrees above the horizon. During the greater part of the time, and particularly when the arch became vertical to us, the stars were as distinctly visible as they are through a light cloud or mist, and had the same appearance. This arch may have appeared to others differently, and many of those differences may have been owing to the situation of the spectator, the position of the arch, and the time when it was seen. As it moved from north to south it must have been vertical to those north of us, and over whom it passed, before it became vertical to us; and by those far south of the place of its final dissolution, it could not have been seen in its greatest beauty and magnificence. I had a fair view of it from half past nine o'clock, when it was not probably more than ten degrees above the horizon, until about eleven o'clock, when it dissolved and disappeared.

I then thought that this arch was composed of vapour, and that it might have received its light from the arch of the Aurora Borealis, then in the north. Any stream of cloud, mist or vapour, stretching across the sky from horizon to horizon, directly over our heads, must of necessity appear in the form of a great arch. Any stream of cloud, mist or vapour, blown sideways by the wind, from horizon to horizon, from north to south, or from any point of the compass to an opposite point of it, must, as it advances towards us, appear to rise, and to assume more and more the form of an arch, until it becomes vertical to us or reaches the zenith; and from the time it passes the zenith, it must as it goes from us appear to descend, and gradually to lose more and more the form of an arch until it reaches the opposite horizon. This arch resembled an arch of vapour or cloud illumined by the brightest meridian sun, and rendered perfectly white, and it formed and broke, dissolved and disappeared in the same manner as such arches form and break, and clouds of other forms dissolve and disappear.

In the morning of Wednesday, the twenty-ninth of August, there was a great arch of vapour or cloud, stretching from the south-west to the north east, and

brightly illumined by the sun, and the clouds and vapours for several days afterwards, continued to run in streams and stretch across the sky.

I now come to the third and last scene, and which was by far the most grand, and one of the most interesting spectacles I ever beheld. I have before described the position, extent, and appearance of the arch of the Aurora. Immediately under this arch, and apparently extending from the horizon to the under part of the arch, there was, as on Monday night, a dark thick cloud. In this arch, and immediately under it on the upper part of the dark cloud, where the arch and cloud seemed to touch each other, were several bright spots, from which a bright light seemed to issue, and to rise occasionally, but not to any great height, nor in any great quantity, until after eleven o'clock. About eleven o'clock, a dark thick cloud from the northwest, passed over or in front of the principal part of the arch, and as it passed along the arch, there appeared to be a considerable agitation in the cloud, or immediately behind the cloud, and about the arch, as if produced by the meeting or collision of different currents of wind. About this time I first perceived some gleaming of light a small distance above the cloud, or the thickest part of it, and a slight quivering motion in several places not far above the cloud, altogether different from any thing I had seen on Monday night.

Shortly after eleven o'clock, there appeared several bright spots near the extremities of the arch on the line where the arch and cloud seemed to touch each other, and one remarkably bright spot near the eastern extremity of the arch, and from which a large quantity of bright light of a circular form seemed to issue and to rise to a considerable height above the arch. About half past eleven o'clock a number of other spots of bright light appeared at various distances from one another all along the arch, and from each of them a large quantity of bright light of a circular form seemed to issue and to extend to a considerable height above the arch through layers of dark clouds of different degrees of density. The height, magnitude, and brightness of these columns, or continued streams of light, varied considerably. Sometimes those in and over the centre of the arch—and at other times, those in and over the limbs of the arch, appeared to be the highest, largest, and brightest. About the time when these columns or continued streams of bright light had first risen to a considerable height, strong gleams of light appeared in the sky above these columns or streams. These gleams of light resembled the gleam produced by throwing suddenly a strong light upon an object capable of reflecting it, and instantly withdrawing the light or the source of it. These gleams all appeared to move upwards, as if the source of them were below, and their motion was extremely rapid. There appeared at the same time to be a rapid quivering motion, produced possibly by the agitation of the clouds or vapour on which the light seemed to strike. This quivering motion and gleaming bore some resemblance to what is usually called sheet lightning, or the appearance of the flash of lightning in a cloud at a great distance; and it also seemed to me to bear some resemblance to the effect produced by the light of the moon, or of a lamp, or of any luminous body shining from a small elevation obliquely on the water, when slightly agitated; but it did not exactly resemble either of those things.

This gleaming and quivering sometimes commenced over the centre, sometimes over the limbs, and sometimes extended beyond the extremities of the arch, and rose almost as high as the North Star. On those occasions, the scene became grand beyond description. Near the horizon a bright arch resting on a dark cloud; on this cloud and arch, a colonnade of pillars of bright light, extending the whole length of the arch, and rising perpendicularly through clouds and vapours far above it. Above the arch and beyond its extremities, bright gleams of light ascending in rapid motion as high as the North Star, and the whole northern section of the Sky below the Polar Star in a state of bright illumination, rapid motion, and extreme agitation.

These displays continued for nearly an hour, and until about half past twelve o'clock. There were some slight displays afterwards, but by one o'clock, the gleaming and motion had ceased; the pillars had subsided, the brightness of the arch had greatly diminished, and the bright cloud which had been under the arch the whole time, appeared to be rising and moving slowly to the eastward. It appeared to me that during the greater part, if not the whole of the time, there had been a considerable quantity of vapour or mist, along the horizon; and for some distance above it in the northern section of the sky, and after the light and movements of the Aurora had apparently ceased, the sky became more clear, and the stars in that quarter became much brighter.

It has been said that the Aurora was visible in the same place about day light on Wednesday morning. As I supposed it had entirely ceased, and I retired about one o'clock, I saw nothing of it after that time. This Aurora Borealis appears to have been seen as far south and west as Washington and Pittsburg, and to have been seen all over the northern and eastern section of the United States, where the weather permitted, and it was most probably visible, and might have been seen, all over the northern section of this continent, unless prevented by the state of the weather, It has been stated in some of the papers that a noise was heard by some person in Connecticut, which he ascribed to the Aurora. Captain Parry and Captain Franklin, were specially charged by the British government to investigate the cause of the Aurora, and particularly to ascertain whether it produced a noise. Captain Franklin informed me the other day, on his passage through New York, that the Aurora had been seen by him and his party about three hundred and forty-eight times, and that they had never heard the slightest noise. Captain Parry, in his Journals, states, that it had been seen by him and his crew a great number of times, probably, at least, as often as seen by Captain Franklin and his party —and that it had never produced the slightest noise on any occasion. If this testimony be not sufficient to afford just ground for belief, that it does not produce a noise, it would be difficult to conceive what proof would be sufficient.

The Aurora Borealis has ever been considered a subject of deep interest, and few subjects have given rise to a greater number of unsatisfactory theories. C. B.

PUBLIC CHARITIES.

Extracts from Essays on the Public Charities of Philadelphia.—Respectfully addressed to the serious consideration of the benevolent, who have "hearts to feel and hands to bestow.—Dec. 29, 1828.——No. II.

In order to ascertain with something like precision the correctness of the idea I have long entertained, of the scarcity of female employment, and the deleterious consequences, as to the happiness and morals of society, of the paltry rate of female wages, I addressed the following letter to the Secretary of the Female Hospitable Society, who has had the best opportunities of forming correct opinions on the subject.

Mrs. Margaret Silver,

MADAM,—Does or does not a large portion of the distress among the poor arise from the low rate of female wages?

2. What do you believe the highest wages a seamstress can earn, who works at home on government work, or for tailors?

3. What is about the average?

4. Is the Female Hospitable Society able to furnish employment to all who require it?

5. If not, what proportion of those who request work, receive it? Yours, very respectfully,

MATHEW CAREY.

Philadelphia, Nov. 7, 1828.

(REPLY.)

Respected Sir,

"In answer to your first question, the Managers of the Female Hospitable Society state, that, in their opinion, *a very large proportion of the distress amongst the industrious poor does originate in the low prices of women's wages, and the uncertainty of constant employment.*

Second Question. The managers believe and know the most wages that can be earned by the closest application to work, either from government, societies, or tailors, *will not average more than from one dollar to one dollar and a quarter per week.*

Third. This Society never has been able to give work to one fourth of those who apply, even in the most flourishing state of its funds. Now, *not more than one in ten receive any.* This Society has 107 subscribers, at two dollars per annum, who paid last year.—Some pains have been taken to ascertain that two-thirds of these belong, some to three, some to four, and all to two other charitable institutions. We also had 204 dollars from a sermon, bread money, and other donations.

We hope Mr. Carey will not deem it foreign to the subject, to observe further, that the moral poor, either men or women, when out of work, especially if they have families, become cast down, out of heart, and discouraged. THEY ARE RELUCTANT TO BE A PUBLIC CHARGE, AND THUS SUFFER THE MOST SEVERE PRIVATIONS RATHER THAN DISCLOSE THEIR DISTRESS, OR DO VIOLENCE TO THE BEST FEELINGS OF THEIR NATURE BY OPEN COMPLAINT. To persons of this description, these private charitable societies are a source of support and comfort, and really mediums of moral good.

We most earnestly hope Mr. C. will combat the erroneous idea which obtains so much at present, that these charities increase pauperism: on the contrary we do assure you, Sir, we feel clear in stating, that in the twenty years we have been active in this society, we can prove *we have been instrumental by timely aid,* (or, to use their own phrase, 'a little help at a pinch,') in keeping hundreds out of the Alms-House,– thereby preserving that principle of honest industry, which is the mutual bond of civil society, and the everlasting barrier between virtue and vice.

We remain, Sir, respectfully,
MARY A. SNYDER, Governess F. H. Soc.
Mr. M. Carey. MARGARET SILVER, Secr'y."

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This letter demands the most serious consideration of the public, as it fully establishes the magnitude of the error which prevails with respect to benevolent institutions, which error, I repeat, operates most perniciously on the poor—and I trust it will call forth the effective support of the wealthy and humane for institutions which have so direct an effect to prevent demoralization, and mitigate human suffering, many of which institutions are in a languishing state for want of that support.

I also wrote to Dr. M. Anderson, who is in extensive practice in Southwark, from whose reply I annex an extract:—

"To your query, 'Does or does not a large portion of the distress of the lower order of the working class arise from the low rate of female wages?' I state that the answer from all parts of our city and districts, must be in the affirmative. It is very clear, that when women were paid 25 cents for making a shirt, and so in proportion for every other article of their work, they could purchase more and live better than they now can, when, as I am told, they receive only 12½ cents for a shirt, and so in proportion for every other article."

It may not be amiss to cast a glance at the mode in which these societies generally start into existence. A few persons of public spirit discover a want of an institution for some particular object—and exert themselves to procure the co-operation of others of similar views. A constitution is formed—efforts are made to procure subscribers—and as there is generally a considerable degree of zeal in the commencement of all undertakings, and as there are many persons in the city who never refuse their subscription to any benevolent object, 100, 200, or 300 subscribers are procured, and the society goes into operation. It is uncommon to make efforts afterwards, when the original zeal abates—and very few subscribers offer voluntarily, unless for objects of paramount claims. Even if new efforts are made, they are generally attended with little success. Every year, death, removals, or resignations, thin the numbers—and, I feel persuaded, that at the present hour, the number of subscribers to all the charitable institutions in the city is not one-quarter of what it was at their commencement.

The Female Hospitable Society consisted originally of 700 subscribers. In 1827, there were only about 107. The Provident Society in 1823, consisted of 1015 subscribers. In 1827, there were but about 600 subscriptions received, including arrearages. The withdrawals from other Societies are much in the same proportion.

Their chief support arises from stocks purchased by donations and bequests of liberal minded citizens.—Without this resource, the most of them would sink into insignificance. Thus, of 452 dollars, received by the Northern Dispensary last year, $270, or sixty per cent. arose from the bequest of one individual, James Wills.

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Institutions for the Promotion of Education.

The Infant School Society of the city of Philadelphia, was established in May 1827. It is under the management of a board of Ladies, of whom Mrs. Perrit is President, and Miss Sparhawk, Secretary. The number of subscribers is about 380. The annual subscriptions last year were $720. Life subscriptions 800 dollars. Donations 928 dollars. Liberal as these contributions are, they are very inadequate to the support of the number of schools which would be requisite for the purpose of carrying into full operation the benevolent object in view. Some of the subscribers have already withdrawn from the Society. The life subscriptions are invested as a permanent fund—and without further aid, the Society will have to depend on the annual subscriptions, about 700 dollars; and interest of life subscriptions.—There are now three schools under the care of the Society—one in Thirteenth street; one in College Avenue, and one for coloured infants at No. 60 Gaskill street.

Since the above Society was established, two others have been organized, one for the Northern Liberties and Kensington, the other for Southwark. The former has three schools, and the latter, one. Thus in the short space of sixteen or eighteen months, there have been established seven of those precious asylums, wherein there are from 7 to 900 children preserved from the turpitude and baseness almost inseparable from prowling the streets, at that period of life when the seeds are sown which continue to germinate through life.

It may be continually asserted that there is no object in the wide range taken by beneficence in this city, in which so much substantial, permanent good can be done to society, in proportion to the expenditure, as by these infant schools. They call loudly for the support of the opulent.

The Society for the free instruction of female children, instituted in 1796, consists of eighteen ladies, of the Society of Friends, who employ two teachers, for the instruction of about 70 children. Their income last year was about 800 dollars.

The Philadelphia Society for the establishment and support of Charity Schools, received last year from 85 subscribers 196 dollars. The total income of the year was 2656 dollars. This institution is in a most flourishing condition, and reflects the highest honour on the city of Philadelphia, and on its liberal founders. It holds in real estate and capital stock 37,110 dollars; 15,415 dollars of the former, and 21,695 dollars of the latter.—There are 450 scholars, male and female, under its care.

The Abolition Society has a fund for the education of coloured people, to which there are 15 subscribers. The annual subscription is five dollars. The receipts of last year were 341 dollars, of which 75 dollars were received from subscribers, and the remaining 266 dollars for rent, dividends on stock, interest on bonds, &c. &c.

The Pennsylvania Society for the promotion of Public Schools consists of 93 members. The annual subscription is two dollars. Its receipts for the last year were 150 dollars. It has no funds.

"The Philadelphia Union Society for the education of poor female children," is incorporated, and has a school for the purpose. As its resources are by no means commensurate with its benevolence, it is obliged to limit its attentions to fifty scholars. The subscription is generally one dollar. The annual subscriptions are not sufficient to defray more than half the expense. The remainder is borne by the interest on some legacies.

The Pennsylvania Institution for the Deaf and Dumb is supported chiefly by the state, which maintains forty-one of its pupils. The whole number there at present is 68, of whom three are supported by the state of New Jersey, two by Maryland, and there are besides 22, of whom 13 are paid for by their friends. The subscription is two dollars per annum. There are 170 subscribers, who paid last year 340 dollars. The receipts of the year, (including legacies to the amount of near five thousand dollars; the contribution of the state; and the payment by the states of New Jersey and Maryland) were 13,208 dollars.

There are 220 subscriber's to the Apprentices' Library. The subscription is two dollars per annum. The receipts from annual subscribers last year were 344 dollars—the total receipt 361 dollars.

Although the Institution for the support of Public Lancasterian Schools does not, strictly speaking, fall within my plan—I think it may not be amiss to devote a few lines to its details. It was organized in 1818.—There are at present 17 schools, 8 in the city, and 9 in the adjacent districts. About 30,000 children have been educated in them. The average number, at one time, is about 4000. The cost to the city and county averages about four dollars each per annum. The boys are received between the ages of 6 and 14—the girls between 5 and 13. The institution is governed by directors and controllers chosen annually by the City Councils and the corporate authorities in the districts, who serve without compensation.

Nov. 10, 1828. HAMILTON.

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No. III.

Societies for Reformation.

The Society for the support of the House of Refuge consists of 302 annual subscribers. The subscription is two dollars per annum. The receipts for annual subscriptions last year were 577 dollars; from life subscribers 1150 dollars; from donations 907 dollars. From the state treasury 5000 dollars; and from the county treasury 5000 dollars.

The Magdalen Society appears to have had in 1826 ninety subscribers. The number who paid their subscriptions last year was 66, at two dollars, 132 dollars.

The subscription to the Society for discouraging the use of Ardent Spirits is only one dollar. The number who have paid this year is seventy-four, $74!!!

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Societies for the Relief of Physical Wants.

Among the charities that stand pre-eminent, are the dispensaries for relief of the sick poor. In a wealthy city with a population of probably 130,000 people, embracing a large portion of the poorer class of society, it might be reasonably supposed, that there would be at least a thousand annual contributors to these institutions; and that the annual contributions would be 3, 4, or 5000 dollars. Such a calculation, however plausible, is miserably falsified by the actual state of things. The whole number of paying subscribers to the three dispensaries, is only about *one hundred and eighty!* Were it not for the interest on donations and bequests, their utility would be reduced within very narrow limits, particularly that of the northern and southern.

There are 105 annual subscribers to the Philadelphia Dispensary, whose subscriptions last year, at five dollars each, amounted to 525 dollars. The gross receipts were 1817 dollars, of which nearly 1300 dollars were for interest, dividends, and house rent. There were 2962 patients under the care of the institution last year, of whom 2756 recovered; 32 were relieved; 68 died; and some were dismissed.

The number of annual subscribers to the Northern Dispensary, as stated in their report, dated Dec. 25, 1827, is 117. But, strange to say, it appears that only about forty-two of them had paid their subscriptions, three dollars per annum. The total of the receipts was 452 dollars, of which 126 was for annual subscriptions; 270 dollars the income of the legacy of James Wills—and the remainder for interest. It thus appears that this valuable institution, but for the bequest of Wills, quite a recent transaction, would have been obliged to limit its operations to the expenditure of 182 dollars, in one of the richest cities of the Union! The whole number of persons under the care of the institution last year, was 1040; of whom 986 recovered; 16 died; relieved and removed, 19; remaining under care, 19.

But the case of the Southern Dispensary is still more a subject of regret and wonder, as the persons in Southwark in want of the succour conferred by a dispensary, are far more numerous than in the Northern Liberties. It is really painful to cast an eye on the statement. The amount of annual subscriptions received last year was only 107 dollars! James Wills's legacy produced 270 dollars. There is in the statement an item of accounts 182 dollars. The entire income of a dispensary, located in a place abounding in persons demanding its assistance, was only 559 dollars! The whole number of patients attended by the physicians last year, was 1017. The number this year, from the long continuance of fevers and agues, in the western part of the district, must be considerably greater. I have been informed that there were, at one time this fall, great numbers of persons lying sick in that part of the district, in some cases whole families, not one of them able to assist another. Whether any corresponding increase has taken place in the funds of the institution, I am unable to say.

The directors of the Northern and Southern Dispensaries have not been wanting in the performance of the duty they owe those institutions, by repeated strong appeals to the beneficence and charity of their fellow citizens. They have answered no purpose.

The object of the Dorcas Societies, to furnish clothing to the destitute, is highly laudable. They literally comply with the precept "to clothe the naked." The Southern Dorcas Society distributed last year 701 garments, principally to the aged, to the sick, and to children, in want of covering to shield them from the inclemency of the weather. This Society, which ought to consist of at least 500 members, has only 60, although the annual contribution is but half a dollar! Their receipts of last year were about 100 dollars!—of which one half was from the benevolent Robert Barclay,* of London, per Mrs. Chew and Dr. Parke! Besides their cash receipts, several charitable ladies and gentlemen furnished them with articles of clothing.

The subscription to the Female Episcopal Society is one dollar per annum—the number of subscribers is 145. The total receipts of last year were 217 dollars.

* This gentleman, a native of Philadelphia, but long settled in England, has contributed one hundred pounds sterling annually, above fifteen years, towards the support of the charitable institutions in this city, most of which have occasionally partaken of his bounty.

"The Female Association of Philadelphia for the relief of women and children in reduced circumstances," was organized in 1800; and is incorporated by the state. Its aid is entirely confined to the relief of persons who have seen better days, and are prevented by laudable pride from depending on the pittance afforded by the overseers of the poor. The Society is eminently beneficial to the community, as it preserves numbers from sinking to that state of wretchedness whereby they become common paupers. It has a school, in which twenty children are taught. The subscription is three dollars a year. The amount of annual subscription last year was 256 dollars; of course the number of subscribers is about 86. The total receipts were 408 dollars.

The Female Hospitable Society has existed twenty years; the subscription is two dollars per annum. It has 107 subscribers. The total receipts last year were 555 dollars.

The "Female Society of Philadelphia for the relief and employment of the poor," consists of 131 subscribers. There is no fixed annual contribution; the amount is optional with the members. The annual subscriptions of last year amounted to 282 dollars; the total receipts were 1563 dollars. This society has high claims on the liberality of the benevolent; as it affords extensive aid to distressed objects, and is managed with great industry and uncommon attention.

The Philadelphia Society for alleviating the miseries of Public Prisons, consists of 73 members. The annual subscription is only one dollar. The annual subscriptions last year (deducting commissions) amounted to 67 dollars 96 cts. The total receipts of the year were $238 96 cts.

The Indigent Widows' and single women's Society has about 260 a 280 subscribers. The annual subscription is three dollars. The total receipts of last year were 2730 dollars; of which 745 were for annual subscriptions; life subscriptions and admissions, 175 dollars; donations, 665 dollars; board of persons in the asylum, 270 dollars; legacies, 347 dollars; for work done, 147 dollars; dividends and ground rent, 381 dollars.

The Board of Managers of this Society in their Report, dated January 10, 1828, state, that

"The funds are *altogether insufficient* for the support of the large family dependent on them. The legacies which have been received, will be funded, according to the requirements of the constitution, which will make a small addition to the permanent fund. There has been some increase from annual subscriptions. The income arising from this fluctuating source amounts to 745 dollars. The expenses of the establishment, with the present size of the family, will average 2000 dollars.—The income of the Society, so far as can be ascertained from such sources as can be depended upon, *falls very short of this amount of necessary expenditure*, and the deficiency can only be made up by such incidental contributions as a kind Providence may dispose the people to cast into the widow's treasury. Those whose lives have been crowned with every blessing, will not forget that they have been thus constituted the guardians of their destitute fellow creatures. They will recollect that the aged and bereaved are still among them; and considering with gratitude the difference of their condition, will, in the exercise of their high privileges, promote His purpose of goodness and mercy, who has assured them 'it is more blessed to give than to receive.'"

The Association for the care of coloured orphans was instituted in the year 1822, and consists of thirty-five ladies, chiefly, if not wholly, of the Friends' Society.—Their receipts last year were 709 dollars; of which 211 dollars were for annual subscriptions; the remainder was from donations and interest.

The receipts of the Orphan Society of Philadelphia, last year, were 3546 dollars; of which 549 dollars were for annual subscriptions. The remainder arose from dividends on stock, donations, life subscriptions, and from work done by the orphans. There are 104 children of both sexes in the house.

The Abolition Society consists of 130 members. The subscription is two dollars a year. The amount received for annual subscriptions last year was 248 dollars. Total receipts 919 dollars.

The Clothing Association is composed of twenty-six ladies, who meet at each others' houses once a fortnight, to make up clothing principally for destitute children. The subscription is two dollars per annum.

The Roman Catholic Orphan Society of St. Joseph was instituted in 1808, and has educated and apprenticed about 100 children. There were originally 300 subscribers; of whom some few have commuted and become life subscribers. Only five subscribers paid last year! The total receipts of the year were 1298 dollars, arising chiefly from interest and property recovered. There are thirty children in the house at present.

HAMILTON.

CANAL DOCUMENTS.

We have received from Harrisburg the documents accompanying the Canal Commissioners' Report; the most interesting of which we will insert. The following is a "*Report on the survey of canal and rail-way routes between the waters of Delaware and Susquehanna, by* MONCURE ROBINSON, *Engineer.*"

To the Canal Commissioners of the state of Pennsylvania.

GENTLEMEN,

I have the honour to submit to you the following as a part of my report, on the different surveys and examinations which have been made by me during the past season, with a view to rail-roads, and to a water communication between the North branch of the Susquehanna river and the Delaware. The late period at which my field duties were closed, prevents my furnishing at this time accompanying draughts and estimates. These are in preparation, and will be transmitted to your honourable board as soon as completed.

In consequence of the novelty of rail-roads in our country, misapprehensions appear to have existed as to the class of cases in which they are applicable. It may not be out of place, before proceeding to a description of field operations, to bestow some consideration on this subject.

It has been suggested that the cheapness of timber gave to us an advantage in the construction of rail-roads, which would so far diminish their first cost, as to recommend their construction in many situations, where in Europe they would be deemed unsuitable improvements; and it has been thought not only that a much smaller trade would justify a rail road in our country, than has heretofore been deemed requisite in England, but likewise that much bolder experiments might be made by us in overcoming ascents by graduation.

It is very readily admitted that the first cost of a plate rail road in Pennsylvania, on which a horse will exert nearly the same useful effect as on the best constructed rail roads of England, will require in general a much smaller investment of capital, and notwithstanding the necessity of more frequent repairs, would be justified by a trade proportionally smaller. It is believed, however, that there is nothing in this circumstance which will authorize a *very material** deviation from the princi-

* A *very material* deviation. Undoubtedly deviations impairing in some degree the value of an improvement are allowable where the *cost* of the improvement is diminished, but these deviations, as will be seen, must be slight, or the objects of the improvement in a great degree lost.

ples adopted by the most distinguished British engineers in the plan and location of such works.

With them there is some difference of opinion as to the relative cost of transportation by locomotive engines and by horses, and the problem is complicated by the necessity of incurring an increased expense in the construction of rail-ways on which locomotive machinery is proposed. There is, however, and ought to be, but one opinion as respects graduation.

This is, that if horse power is to be employed, that graduation should be adopted on a rail road as nearly as practicable, which is best suited to the anticipated trade; or in other words, which will render necessary the same number of horses to transport each way, with equal facility, the anticipated tonnage. If any facility beyond this point is afforded in one direction, it necessarily, and to the same extent, operates as a difficulty in the way of transportation in the opposite direction.

On the Stockton and Darlington rail-way, it has been found by experiments with the Dynamometer, that a descent of one-eighth of an inch per running yard, or of eighteen feet per mile, is that on which it requires the same muscular effort of a horse to descend at a given rate with loaded wagons, or to return with empty. The wagons in these experiments were reduced to their minimum weight, and constituted about twenty-five per centum of the whole load. This of course forms the extreme point of *advisable* graduation in a rail-road. As the inequality between the ascending and descending traffic of a rail road becomes diminished, the road-way should in the same ratio approach to a level.

It will be agreed that the extent to which rail roads could be introduced in most countries would be but small, were the ascent they could overcome, limited by the graduation which would accord with these positions; and the ground over which they could be located, would be in general that on which a canal would be preferable. Accordingly public attention had been but very little drawn to them in England until within a few years past. The application of locomotive machinery in the beautiful experiment of the Stockton and Darlington rail-way, and the introduction of inclined planes and stationary power on other lines of rail-way, have enlarged the scope and capability of rail-ways to a degree which some years since could not have been predicted without incurring the reproach of an overshare of enthusiasm. (A)

It is to these aids, to the cheapness of stationary power, where a business of considerable extent can be commanded, and to the capability which locomotive engines possess within certain degrees of graduation, of being made to produce, at all times, their maximum of useful effect, either in power or in velocity, that the rail road system must look for the largest development of its advantages and resources. That it never can be advantageous to overcome considerable ascents by graduated rail roads, on which horse power is proposed, the following considerations abundantly prove.

The force exerted by a horse transporting a weight on a common road in overcoming an ascent, is of two kinds; that necessary to overcome the friction of the road-way, and that expended in lifting his load. It is only in economising the first of these forces, that the rail-way is made a labour-saving machine. The last must always remain the same on an inclined plane of every kind, and continues a fixed quantity at the same angle of ascent on a country road, a McAdamized turnpike, or the most perfectly constructed rail road.

Though therefore in the case of a *level* turnpike, its substitution by a rail-way has the effect of reducing the power requisite to produce a given effect to the tenth or twelfth part of what was previously required, yet the result arrived at is widely different, if an ascent be admitted in the rail-way, which would be scarcely sensible in a turnpike, and at any rate be attended with no serious disadvantage. The important bearing of this subject, and its susceptibility of being settled with precision, will form an excuse for some further investigation.

Differences of opinion are entertained among professional men as to the power of a horse. The standard fixed by Mr. Watt, in his estimates of steam power is certainly too high, and while some late writers have estimated the power of a good horse travelling eight hours per day at the rate of 2½ miles per hour, as equal to raising 125 pounds suspended over a pulley, others have reduced his power of traction to 112 pounds.—However this may be, the experiments of Messrs. Wood & Stephenson, with the Dynamometer, have ascertained with certainty the force requisite to overcome friction on well constructed rail roads. The conclusion at which they have arrived after a series of well conducted experiments, under favourable circumstances, but such as are attainable in practice, is—that one pound suspended over a pulley will keep in motion 200 pounds on a level rail-way.

This fact is all that is necessary to determine the precise diminution of useful effect in forces of any kind, exerted on inclined planes, compared with that produced on levels. To ascertain the precise weight which can be kept in equilibrio on a plane, by a given weight suspended over a pulley, we have only to multiply this

(A) The expensiveness of horse power for raising trains of wagons on the inclined planes of rail-ways, may be appreciated by the reflection, that if one pound suspended over a sheave will keep in motion two hundred pounds when started, on a level rail road; a horse can with equal facility draw two hundred pounds, or raise one: or what is in other words the same proposition; that as great an expenditure of power is required to raise a given tonnage one mile, as to transport it two hundred miles.

Fixed steam engines, where a trade is sufficient to justify powerful machinery, and to keep it constantly employed, diminish in a very large proportion, the cost of overcoming ascents. Was the business of a rail road considerable enough, they would likewise present a far cheaper power than either locomotive engines or horses, for overcoming the resistance produced by friction. In but one instance, however, that of the Hetton Colliery rail-way, have they been recommended exclusively of other power, by considerations of economy. The enormous bu siness of this rail road, and the regularity to which ithas been found possible to reduce it, render them for every service on the line, the most economical, and on other considerations, the most advisable power.

A very different case is presented on a rail-way, on which the trade would be but limited and uncertain.—For the inclined planes of such a road, fixed engines would be smaller—of course their attendance more expensive in proportion, than that of larger engines—and they must be kept in readiness to raise trains of wagons, at an annual expense not a great deal less than would be required to keep them constantly at work. Under these circumstances the toll at lifts to indemnify the proprietors of the rail-way, must on a ton of property be nearly in an inverse ratio with the business of the road.

Locomotive engines in this case will generally constitute the most advisable power, provided the ascent and descent of the rail-way can be overcome by such a rise and fall per mile as will admit of the engine urging on its load by the mere adhesion of its wheels. A considerable deduction, it is true, is to be made from their useful effect on account of the weight of the engine itself. But this is found to be more than counterbalanced by the expense of attendance, and of dormant power in fixed engines not steadily employed; and compared with horse power they not only present a great gain in point of economy, but the important advantage of exerting at all times their full force, on the steeper parts of the road in overcoming its greater inclination, on more gentle ascents, or on descents, in urging forward the load with increased velocity.

weight into the length of the plane, and to divide by its height, or in other words, to multiply the weight by the distance in feet in which the plane rises one foot. If we then ascertain by a common proportion the additional weight which must be suspended in order to overcome the friction of this ascertained amount, we have at once the whole power required to produce a given effect.

For example, on a plane rising one foot in one hundred, or 52.8 feet per mile, 112 pounds, suspended over a pulley will keep in equilibrio 11,200 pounds, or five tons. To overcome the resistance produced by the friction of this quantity would require (supposing it the same on a level rail-way or an inclined plane,) 1-200 part of the amount, or 56 pounds more. The whole weight necessary to be suspended would be 168 pounds, and the useful effect of one pound would be equal to overcome the resistance of 66. 2-3 pounds, that is to say one-third of that produced on a level rail-way.

The following table will present the useful effect of a pound weight suspended over a pulley in overcoming resistance on rail roads at different angles of inclination deduced from the foregoing reasoning: a glance at it will show the rapid diminution of useful effect at every increase of velocity.

Distance in feet in which a rail-way rises one foot.	Rise pr. mile.	Useful effect of one pound suspended over a pulley	Useful effect of a horse supposing his power 112 lbs. in pounds.	Useful effect of a horse in tons.
1000	5.28	166.67	18.667	8.33
900	5.87	163.64	18.327	8.18
800	6.60	160.00	17.920	8.00
700	7.54	155.56	17.422	7.78
600	8.80	150.00	16.800	7.50
500	10.56	142.86	16.000	7·14
400	13.20	133.33	14.933	6.67
300	17.60	120.00	13,440	6.00
200	26.40	100.00	11.200	5.00
100	52.80	66.67	7.467	3.33
60	88.00	46.15	5.169	2.31

The allowance for horse power given in the preceding table may possibly be supposed too small, whilst it will in general be deemed quite sufficient. It may however be a matter of some doubt whether on such rail roads as it will be for a long time advantageous to construct in Pennsylvania, (wooden rails plated with iron bars,) as large a proportion of useful effect may be anticipated, as on the cast and wrought iron railways of England. The following formula presenting a more abstract view of the subject is therefore subjoined.

Supposing D the distance in which a railway rises 1 foot.

H the power of a horse, or number of pounds he can *raise*, travelling 2½ miles per hour.

T the number of pounds he can *draw* when travelling at the same speed.

Then $\frac{H+DH^2}{T}$ = the performance of a horse.

A comparison of the results of this formula with those given in the last column of the preceding table will serve to establish its correctness.

It must be observed that the preceding reasoning does not apply to the case of an undulating railway, or one of *short* as well as slight ascents and descents. On such a railway the greater occasional efforts of the horse are compensated by his alternations of light labour, and the advantage of bringing into play new muscles, balances the injurious effects arising from his being occasionally overloaded.

It may be worth while to add before leaving this subject, that experience, in the only case in our country in which it has been attempted to overcome considerable ascents by graduations, is in perfect accordance with the foregoing views. The railway of the Lehigh company at Mauch Chunk, overcomes a rise of 767 feet in eight and a quarter miles, averaging about one degree of acclivity per mile. I was informed by the intelligent gentleman to whom the affairs of the company are intrusted, that the fair performance of three mules is to transport up the plane seven empty wagons, weighing about 1450 pounds each, or making an aggregate of 4½ tons, each set of mules making 2½ trips per day.—Two very strong horses he thought would be equal to the same task which would give 2¼ tons for the performance of each horse. This is less than the useful effect of an average horse given in case 10th of the preceding table. The difference may be ascribed to the unequal distribution of the rise of the plane, & some other disadvantages. Constructed as the Mauch Chunk railway was for a trade altogether descending, motives of economy might have recommended this large declivity. In a railway, however, intended for a promiscuous commerce, enough has been said to show that such a location would promise and perform but little.

Under these views, it has been deemed important to conduct the examinations with a view to rail roads, in such a manner as to ascertain with certainty,

1st. The least possible elevation necessarily to be overcome between the points specified in instructions as points of termination.

2d. Where horse power alone could be employed. The least ascent per mile necessarily to be overcome by graduation between the Susquehanna and the dividing ground, that is to say, in the direction of greatest transportation.

The survey first to be attended to, was "that from some point on the Schuylkill canal to a point or points on the Susquehanna river, between Cattawissa and Sunbury, with a view of connexion of these points by a rail road."

The difficulties in the way of this connexion arise from the depth and direction of the valleys of the Mahanoy and Little Mahanoy. Heading with the most easterly branch of the Schuylkill, the first of these streams pursues a general course of S 11° W, and in consequence crosses a tolerably direct line from the head of the Schuylkill navigation to a point within the range admitted by the law, nearly at right angles. The Little Mahanoy has a shorter course, but the same direction, and at their junction these streams present a gulf 700 feet lower than the most depressed point of the Broad mountain. Formidable as is the obstacle thus presented in the way of a rail-road, it nevertheless appeared that this was the most favourable point for crossing the Mahanoy valley. A line crossing lower would of course have to pass over a point still more depressed, and one crossing higher must necessarily traverse two valleys instead of one, and an intervening ridge, unless traced around the sources of the lesser stream. It was discovered also on a survey and level of the Broad mountain, that its most depressed points were in the neighbourhood of the forks of the stream, and the same fact was so evident on a view of the Mahanoy mountain, or the ridge dividing the tributaries of the Mahanoy and those of Roaring creek and Shamokin, that it was deemed unnecessary to establish the precise difference with instruments.

Lines accordingly were traced from dam No. I, of the Schuylkill navigation, across each of the most depressed points of the Broad mountain, to the forks of the Mahanoy. The first of these lines passes through the borough of Pottsville, ascends the valley of Norwegian creek to station No. 54, three miles and seventy-three and a half chains from our point of commencement, and there rises by an inclined plane 108 feet of perpendicular elevation to a depressed point in the ridge between Norwegian

creek and the west branch of Schuylkill. From this point the line rises eight feet per mile to the foot of the Broad mountain, which is ascended by a series of inclined planes and graduated roadway to the summit. At this point we are elevated 950 feet above our point of commencement, and 750 feet above the forks of Mahanoy. From the summit to the forks the descent is effected down the valley of Rattling run, in the same manner as the ascent of the Broad mountain, by inclined planes and short intervening stages of graduated roadway.

The second line to the forks of Mahanoy diverges from the one above described at station No. 18, immediately beyond the borough of Pottsville. This line might perhaps have been most advantageously commenced, near the furnace of Mr. Pott, but it was not deemed essential in a preliminary trace to fix with precision its point of commencement. Passing up the east branch of Norwegian creek to station No. 8, thirty rods below the North American company's coal mine, it here rises by an inclined plane 110 feet to the level of a depressed point in the dividing ridge between this branch of Norwegian and mill creek. Afterwards passing up the valley of the last named stream, it attains the most depressed point of the Broad mountain, at an elevation of nine hundred feet above our base, near James Stephens', in a distance of six miles and thirty-five chains farther. The whole distance being overcome by four inclined planes, affording an aggregate lift of 605 feet, and something less than six miles of graduated rail-way, rising from ten to twenty feet per mile. From letter C, or our summit at this point, the line is traced along the northern slope of the Broad mountain to a bridge 15 feet high at the forks of the Mahanoy, descending by inclined planes 485 feet, and 200 feet more by a graduation of 30 feet per mile.

From dam No. 1 to the forks of the Mahanoy, the whole distance by the 1st, or westerly line, is 12 miles and 77½ chains; by the 2d, or easterly line, the distance is 16 miles and 42 chains. The difference in distance 3 miles 44½ chains, is counterbalanced by important advantages in the easterly line. This last line can be more advantageously graded, and its summit is fifty feet more depressed than that of the first or westerly line, and more depressed than any other part of the Broad mountain between the Little Schuylkill river and the head of Mahantango creek. A more material recommendation of this line is the extensive accommodation it will afford to an abundant coal district. The veins of coal which are broken by the Mill creek, and which would be generally accommodated by it, are represented as the most valuable in the neighbourhood of Mount Carbon, and the point at which this line crosses the Broad mountain, is believed to be the only one by which the valuable bodies of coal between the head of the Mahanoy and its tributary the Shenado, could be commanded.

From the forks of Mahanoy, the only feasible route to the Susquehanna, would be in a great degree by the valley of the Shamokin. Rising by three inclined planes, to the most depressed ground between the Mahanoy and the Shamokin, at an elevation of 460 feet above the forks of Mahanoy, the line was afterwards carried along the valley of this stream, 17 miles and 74½ chains to No. 628, falling in this distance by three inclined planes 290 feet, and 393 feet by a graduation varying according to localities between 10 and 30 feet per mile. From this station (near the Shamokin meeting house) two lines were traced to the Susquehanna. The first, five miles and nine chains long, ascends the Shamokin ridge by two inclined planes to the proposed summit, near the school house, elevated 287 feet above No. 628, and thence descends by a continued inclined plane, to the river at John Boyd's mills. The second line 10 miles and 62 chains long, passes along the Shamokin valley on the north side of the stream to Sunbury, falling in the whole distance 112 feet or between ten and eleven feet per mile. It was deemed proper to carry the first line down the Susquehanna, as far as the Danville bridge, in order to ascertain what facilities or difficulties would present themselves in the way of a connexion with this town.

Extensive parallel surveys and examinations, were made at different points, in determining on the trace above described. These resulted in the conviction, that no other lines crossing the Mahanoy valley were worthy of consideration, besides those a sketch of which has been briefly given above. The results arrived at were, however, far from satisfactory, and it was resolved to trace a line around the sources of the Lesser Mahanoy and Mahanoy creeks, to the head of the Cattawissa, and thence down this stream, to ascertain how far such a line might avoid the objections in those traced.

The experimental lines which were accordingly traced, resulted in the certainty, that from summit C. before mentioned as the most depressed point of the Broad Mountain, a railway is practicable along the Northern slope of that mountain, rising from ten to twenty feet per mile to the head of the Mahanoy creek, and the dividing ground between this stream and the Little Schuylkill; from this point a railway would be carried perfectly level to the most depressed point in the dividing ground, between the Little Schuylkill and the south branch of Cattawissa. Here it must descend 600 feet by inclined planes in something less than four miles, after which it would be carried on a descent, commencing at 27½ feet per mile and gradually diminishing to 13 feet per mile at the end of nineteen miles farther; thence to the town of Catawissa, a railway might have a nearly uniform descent of 13 feet per mile.

Summary of Preceding Lines.

The whole length of a line commencing at dam No. 1, of the Schuylkill navigation, crossing the Broad mountain at the head of Rattling run, the Mahanoy at the forks, and ending at Sunbury, is 46 miles 25½ chains.

That of a line crossing the Broad mountain at summit C. and passing thence along the northern slope of the same to the forks of Mahanoy, and thence as preceding line to Sunbury, is 49 miles 70 chains.

That of last described line terminating at Catawissa, is 58 miles 13 chains.

It remains to compare this last line with the most advantageous trace which would cross at the forks of the Mahanoy. This is believed to be decidedly that crossing the Broad Mountain at summit C. of course so far corresponding with the line to Catawissa. It will be useless then, in a comparative view, to go farther back than this point.

1st. As to elevation to be overcome. This between letter C. and the summit of the Catawissa line, is 151, 49 feet. Between letter C. and the culminating point, beyond which a line falls to Sunbury, is 445,7 feet; making a difference to trains of wagons going to the Susquehanna of 294,21 in favour of the Catawissa route.—To produce going from the Susquehanna to the Schuylkill, this difference would be increased, by the difference in elevation between the surface of the North Branch canal, opposite Catawissa, and that of the pool at Sunbury, or by about 36 feet.

2d. As to graduation. The Catawissa route in being adapted to locomotive engines, appears to present itself on very favourable ground. But for a rail road which would be a common highway, and on which horse power would be employed, its advantages in this respect would not counterbalance its increased length.

The merits of a line terminating at or near Danville, have been left out in the preceding comparison. Such a line would not be as advisable for a public highway as the one terminating at Sunbury, in consequence of the amount of stationary power which would in this case be required on each side of the Shamokin hill.—But were a line of railway executed to Sunbury, it might be advisable to construct a single railway to the North Branch of the Susquehanna river at or near Danville, on which transportation should be effected by in-

dividuals or a company. The business of the road might in this case be so arranged, as that trains of wagons should be in readiness to leave the Susquehanna at the time that returning trains would reach the foot of the Shamokin hill. The horses might be there unhitched, employed to draw up to the School-house summit in two loads, wagons going to the Schuylkill, and these last in descending into the Shamokin valley be made to lift up returning trains. The horses would then proceed with the trains going to the Schuylkill whilst those returning to the Susquehanna would run down to the river by their own gravity on a continued inclined plane. The saving in distance by this branch to so much of the trade of the North Branch canal, as might be arrested by the railway where it first touched the river, would be about 18 miles.

It remains to consider the Catawissa valley in its most interesting aspect, not only as a line of communication with the head of the Schuylkill navigation, but as presenting in connection with the Little Schuylkill the most direct feasible route from the North Branch of Susquehanna to Philadelphia, and by way of Quakake valley a very direct route to the Lehigh. Examinations were made of these branches only so far as to settle the general question of practicability. It having been intended to return to them, in the event of completing in time other surveys which were deemed more important. It would require a more complete examination than was made, and statistical facts of which I am not in possession to determine how far a railway along the Catawissa valley with branches as suggested from its summit, would be justified by the business it would command. That such a railway would command a very considerable trade, and a more extensive and varied business than any other line of railway between the North Branch of the Susquehanna and the Delaware there is no doubt.

By its branches it would accommodate much of the anthracite district on the Lehigh, the whole of that on the Little Schuylkill, the Mill creek and the Mahanoy. By the same branches supplies of provisions would be most conveniently and cheaply furnished from the fertile country on the Susquehanna to the mining districts on the waters of the Lehigh and Schuylkill. Produce, which it would be an object to transport quickly to Philadelphia, and the greater part of the returning merchandize, would probably be conveyed by the Catawissa valley, and in the event of a temporary interruption in the navigation of the Susquehanna division of Pennsylvania canal, this line of railway by offering in such a contingency both the Lehigh and Schuylkill canals, would present a most valuable resource to the trade of the North and West branches.

It should be observed before leaving this subject, that the execution of a line of rail road along the Catawissa creek, need not involve the execution of more than one of its branches in the first instance, and that this rail road might be for the greater part of its length a single rail road. If transportation was effected by locomotive engines, this would be equal to any business which could for some time reasonably be anticipated, and by placing transportation, as in this case it should be placed, in the hands of a company, it would be easy so to regulate the business of the road, as to avoid the meeting of trains of wagons except at fixed crossing places.

From the Catawissa and Little Schuylkill summit, a line of levels was carried, and a critical examination made along the whole of the dividing ground between the North Branch of Susquehanna, and the Lehigh, as far north as the Wilkesbarre and Easton turnpike; and more minute examinations made in relation to two lines of railway which have been proposed, the one by way of Black creek and Little Schuylkill, and the other between Wilkesbarre and the Lehigh. Each of the proposed lines presents very great difficulties. An elevation of 1829 feet above tide in the one case, and 1834 feet in the other, must be overcome. Neither of the routes admits of an advantageous profile, and each would be very circuitous in proportion to the length of a direct line between its points of termination.

The next in order of field duties performed, was an examination of a route by the way of the Nescopeck and Lehigh with a view both to a canal and rail way.

A full examination of the whole dividing country between the North branch of the Susquehanna and the tributaries of the Delaware, commencing at the head of the Schuylkill, and continued as far north as the sources of the Lehigh, is conclusive of what had been before believed, that no route presents facilities for the construction of a canal deserving of consideration with the exception of the valley of the Nescopeck. One branch of this stream heads within two miles of the Lehigh, at the point where the Lehigh affords a sufficient volume of water at all seasons, for a lock and dam navigation. Our examinations were commenced at the most depressed point between the two streams, and directed in the first instance to ascertaining what supply of water could be commanded on a summit level.

Assuming for our base a level 14 feet lower, a line was traced up the valley of Wright's creek until the surface water of this stream was cut by it; thence across the gently sloping country which separates Wright's creek and Pine run, and crossing this stream was traced around the bluffs of the Lehigh, and up the valley of Bear creek to a point at which this last stream can be conveniently taken in. These streams were guaged above the points where they were intersected, at a time when they were said to be very low, and at points which admitted of a satisfactory measurement of their volume. They were found to furnish.

Wright's creek, per minute		407.5 cubit feet.
Pine run, per	do	201.3
Bear creek per	do	1425.3
On an aggregate supply of		2034.1

This handsome supply of water, with the certainty that it could be materially increased by the construction of reservoirs on Bear creek, (for which very favourable situations present themselves,) and that the whole volume of the Lehigh might be commanded by a continuation of the feeder line, placed the subject of an adequate supply of water at rest, and returning to BM. S. 1. our point of beginning, the survey of a line of canal was commenced.

A line was traced from BM. S. 1. along the valley of Wright's creek to the Lehigh, and from the same point along the valley of the Nescopeck to a point of junction with the North branch canal 96 feet below the bridge at Berwick. The distance from S. 1. to the Lehigh is 2 23 miles, and descent 209.217 feet. From S. 1. to the North branch canal, the distance is 35,05 miles, and descent 829.284 feet, making the whole length of canal traced 37.28 miles, and the whole fall to be overcome both ways 1038.501 feet.

The survey made was altogether topographical, without any assumption of base lines, which with the limited knowledge previously possessed of the country, must generally have varied from that which would prove most advisable, and have been unnecessarily embarrassing. A review of the field notes, topographical sketches and slopes of ground, presents the following as the most advisable profile of a canal.

The summit should be reduced 70 feet by means of a tunnel of 175 poles in length, and a deep cut for a short distance at each end. The Lehigh may in this case be commanded at the mouth of Bear creek by a dam 12 feet high, and a feeder not exceeding 5.12 miles in length. The fall still to be overcome to the Lehigh is 139.217 feet, and the descent to the North branch canal 759.284 feet. The descent to the Lehigh would be effected by locks of ten feet lift with intervening basins. At one point, however, (the falls of Wright's creek) three ten foot locks must be combined, (of course double locks resorted to) in consequence of the rapid fall in the ground at this place,

which would render it very difficult to construct basins. On the Susquehanna side of the summit level, contiguous locks and basins (in one instance as many as five) may generally be obtained as far as the mouth of the little Nescopeck, without any material accession of expense. Beyond this point it will be necessary often to construct a canal in the bed of the Nescopeck, and economy will recommend the lowest level which regard to the safety of the canal may admit; of course the fall in this part of the canal must generally be effected by detached locks.

The connexion with the north branch canal, will be made by an aqueduct 1230 feet long, and elevated 20 feet above the water of the river. The difficulties in the construction of a canal arise,

1st. From rock excavation. The feeder line traced by us would not certainly be the one adopted in the event of a very material reduction of the summit. But a great deal of rock must necessarily be encountered in a feeder line, whatever may be its profile. The tunnel must be perforated through red sand stone, and a large proportion of the deep cutting at each end, will consist of the same: the lock-pits must generally be excavated in the same kind of rock, and in excavating the intervening basins it will often be found.

Between the western termination of the summit level and the point at which the canal trace crosses the Berwick turnpike, a canal might be formed along the rocky declivities which frequently present themselves, by embankment. It will be judicious, however, in such cases to encounter much rock In preference to forming the canal entirely or in a very great degree on steep slopes.

2*dly*. In long stretche sof embankment and slope wall. Between the summit level and Berwick Turnpike the sections of a canal would be often combined excavation and embankment; but below this point, the concave shores of the Nescopeck creek present every where either perpendicular cliffs, or a naked surface of rock. As far as the mouth of Black creek, a canal would be formed most conveniently at such points, by excavating a new channel for the Nescopeck in the opposite flats, occupying its bed, and protecting this *natural* canal by an embankment and slope wall, of sufficient height to guard against the freshes of the creek. Below the mouth of Black creek, the increased width of the Nescopeck will render it necessary to form the canal under similar circumstances, by embanking in the channel of the creek. The earth for this purpose will be generally obtained from the opposite flats, and though they in a great degree consist of sand, with a very slight mixture of loam, will be sufficient for forming a canal, provided a due degree of *weight* be given to an embankment. This would be most advantageously furnished by constructing the outside of the embankment of loose rock presenting a larger, or smaller cross section in proportion to the height of the bank. On this loose rock a slope wall would rest, and the inner part of the bank would be secured against abrasion by a pavement.

3*dly*. In the connexion with the North Branch canal. The aqueduct contemplated for this purpose, would consist of arches of timber supporting a wooden trunk, and resting on stone piers. The piers of such a structure should be crected of large and well jointed stone, secured by carefully breaking joints, and occasional cramps. The wooden superstructure must necessarily be framed in the strongest manner, and will involve a considerable expense in iron bands and bolts.

A dam and tow-bridge by which it has been proposed to form this connexion, would not be advisable for the following reasons.

It would require a dam 17 feet high, or one which would raise the surface of the river 14½ feet, at the Berwick bridge, to place it on a level with the lower level of the canal at this place. A dam lower than this would operate as a drain on the North branch canal, in proportion to what it wanted of this height, and to the activity of trade on the Nescopeck line, and would be therefore inadvisable.

How far such a dam would effect the line of canal, or the river flats, above Berwick, I am possessed of no facts to determine. It would certainly present the following disadvantages.

The Berwick bridge would be endangered from accumulations of drift wood and ice against its arches; the entrance to the North Branch canal would require an expensive guard lock and protection walls, spacious locks must be placed in the dam to pass arks and rafts. The *expense* of lockage on the Nescopeck canal be increased by a lift of 8 feet, and the *amount* of lockage to boats passing from the Nescopeck *up* the North branch canal, or *descending* the North branch and entering the Nescopeck canal be augmented 16 feet.

It remains to mention the most formidable obstacle in the way of the canal. This is unquestionably the lockage. In addition to the rise in the Nescopeck valley, and the fall from the summit level to the Lehigh, that of this last stream between Wright's creek and Mauch Chunk (597 feet) is to be added in estimating the cost and comparative value of this route.

The field notes and topographical sketches taken with a view to a canal, furnish, also, the facilities and difficulties of the Nescopeck and Lehigh route, with a view to a rail road. In a more depressed summit than that of any other route, it certainly presents one important advantage, which is counterbalanced.

1st. By the difficulties arising from frequent cliffs of rock on the Lehigh, and the lower part of the Nescopeck. This circumstance combined with the irregular fall in the latter stream, would render the grading of a rail road along a considerable portion of the route a matter of much difficulty.

2d. By the indirectness of the route, whether in relation to the North, or West branch of the Susquehanna.

It will be observed, on reference to the map of Pennsylvania, that after having arrived by a rail-way at the mouth of Wright's creek, we are within 13 miles of the borough of Wilkesbarre. Produce then, descending the Susquehanna river, or North branch canal, must travel to Berwick by the canal or river, and 37 28-100 miles additional by a rail-way, to attain a point which it could reach in about 15 miles, by a well graded turnpike road. An ordinary turnpike would under such circumstances compete very advantageously with a rail-way, and at any rate the advantages of the latter improvement would not be sufficiently decided to justify its being made.

In relation to the West Branch trade a line by way of the Nescopeck valley would be about 18 miles longer than one by way of Catawissa creek.

These remarks apply also to the proposed Nescopeck and Lehigh canal, with the difference only in favour of the canal as a superior improvement, and that it avoids a change in the mode of conveyance.

The field labours of the season were concluded by examinations, with a view to a connexion between Broadhead's creek and the Lackawanna. It has been thought that such a connexion might be effected either by a canal or rail-way, by two routes. The one passing up the valley of Roaring Brook, crossing the Lehigh and Tobyhanna rivers, near their source, and descending abruptly from the table land in which these streams rise to the valley of Broadhead's creek. The second leaving the valley of Roaring brook at a point where it approaches the west branch of Waullenpaupack, crossing the dividing ridge between the two streams, and afterwards retaining a level until a descent can be effected into the Broadhead's creek valley.

The result of the examinations made with regard to the first route was unfavourable. A great elevation, (1900 feet above tide) must be overcome, and much difficulty encountered in crossing the Lehigh and Tobyhanna rivers. A considerable fall of snow which oc-

curred when the levels had progressed to within a short distance of Mr. H. W. Drinker's, prevented any examinations being made with instruments, with a view to the second route. A reconnoissance of a part of the ground necessarily to be traversed, made in company with Col. Porter of Easton, Judge Coolbaugh and Mr. Drinker, commissioners under the act incorporating the Delaware and Susquehanna canal and rail road company was not as satisfactory as had been hoped. It is believed however, by the commissioners, and it is thought very probable, that the elevation to be overcome by this route would not be within 300 feet of that to be overcome by a route crossing at the head of the Lehigh. Other opinions of these gentlemen are explained in a letter to the undersigned, which is herewith annexed.

All which is respectfully submitted.

MONCURE ROBINSON,
Civil Engineer.

Philadelphia, Dec. 4, 1828.

We lately addressed a circular letter to gentlemen in each county town in the state, requesting information relative to the interior, and are much gratified in receiving already, communications from several in reply. One was presented in a late number, and we have now the pleasure to insert 3 more—one from a gentleman in Adams, another from Green county, and the third from Jefferson county; and we hope soon to be favored with similar information from the other counties addressed.

GREENE COUNTY.

Greene county, originally included in that of Washington, was erected and organised on the ninth day of February, 1796, and is bounded by the county of Washington on the north, by the river Monongahela on the east, and by the state line between Pennsylvania and Virginia on the south and west, nearly 40 miles in length, and 24 in breadth. The territory of this county is of a kind greatly diversified, from the most fertile vallies to the poorest ridges; it is delightfully watered by streams of the most beautiful kind; no country on earth can be better watered with streams and fountains, of the purest kind. Its principal streams are in number six, namely, Dunkard, Big Whitely, Little Whitely, Muddy, and Ten Mile creeks, all which empty into the Monongahela river, and Wheeling creek, which empties into the Ohio at Wheelingtown; all those streams, together with Fish creek, which also empties into the Ohio, are of the largest size of streams under the denomination of creeks, take their rise and issue from the hills in the western part of this county, and not far from each other. In the vicinity of those streams, and along their meanderings, are some of the most delightful vallies in Pennsylvania, abounding in the most luxuriant vegetation; until lately covered with timber of every description known in Pennsylvania, of a most magnificent growth, and not long since the retreat of the solitary Indian, and beasts of the forest, but at present the charming abode of as enterprising and strong minded a race of men as belongs to the state, not entrammelled with unnecessary forms or ceremonies, either in their religious or civil duties; their minds partake of and are strongly imbued with those principles of rational liberty which such a state is calculated to produce. The population of this county, although in their manners apparently rough and uncouth, are, in general, possessed of masculine strength of understanding, sentiments of the most extended hospitality, feelings of the purest benevolence, and without any formality or pomp would seem to comprehend and understand their rights and duties almost intuitively. Between the streams, all of which run east and west, and after leaving the vallies, the country rises into ridges, covered with immense quantities of timber of the most valuable kind; the northern sides of those ridges are composed of a deep and rich soil capable of producing corn and grass to a most bountiful extent; the southern sides not so rich or so fertile, but better calculated for wheat or rye. The western part of this county might be considered too hilly for an agricultural country, but, no doubt, (at a day not far distant) will afford extensive profits to the herdsman and cultivator of the vine. Few counties of the same extent and population produce and send to market larger quantities of stock of every description: this appears to be the most profitable mode of farming in this county, to convert as much of the land as practicable into meadow and pasture for the raising of stock, which can be taken to market at a small expense; and to this method the farmers of this county have generally turned their attention; but when our Baltimore and Ohio rail road, and Chesapeake and Ohio canal come to be completed, a different system may be adopted. Greene county has no iron works, at present, in operation within its limits, formerly both a forge and furnace were in operation near the mouth of Ten Mile Creek, but, from some cause unknown to the writer, have been suffered to go to decay. Iron ore is said to abound both on Dunkard and Ten Mile, but as iron works are numerous in the neighbouring county of Fayette, the people of this county have sustained no inconvenience from the want of an iron making establishment within her own borders; hence, probably, the cause of none existing in this county. A very large and extensive woollen factory in Clarksville, near the mouth of Ten Mile creek, was in full operation during the late war, and for some time afterwards, but for some years back has languished and declined: lately, however, it has changed masters, and seems to have started with fresh vigour, and under the auspices of a judicious tariff, is likely to prosper. On all the different creeks are mills and other machinery (some of the first rate) sufficient for all the purposes of the county.

Waynesburgh, the county town, is a flourishing village, and is situated in a beautiful valley near the bank of Ten Mile creek, about twelve miles from its mouth, and within one mile of the centre of the county; and if the prosperity of a place is promoted by a pure air, good water, a rich and fertile soil, timber and stone, coal, with all the other necessaries of life, and many of its luxuries in abundance, Waynesburgh must prosper; at present the town is incorporated by act of Assembly, and consists of about eighty dwelling houses, many of them elegantly built of brick and cut stone, containing a population of about 600 individuals; in it there is a meeting house of brick, one other of stone and one of wood in the immediate neighbourhood of the town, an elegant court-house of brick, a stone jail, one brewery, four tanneries, nine stores, and three taverns; an excellent school is also established, conducted by James M'Connell, Esq., who teaches the Greek and Latin languages, mathematics, &c. The natural scenery around this place is of a grand and sublime order, and to the attentive observer and admirer of Nature's works, affords the most pleasing and delightful sensations. In a natural point of view, no place can afford scenery more pleasing to the romantic, or even the philosophic mind; the ideas of rural felicity in their most brilliant extent may here be realized. The village next in importance in Green county is Jefferson, situate also near the bank of Ten Mile creek, eight miles east of Waynesburgh.

There is also New Lisbon, commonly called Carmichael town, situate on Muddy creek, a village which has lately flourished to a considerable extent; it possesses the advantage of being surrounded by land of a superior quality, perhaps the best in the county, and equal to that of any country.

Greensburgh, heretofore a place of business, and near which is an extensive glass work establishment, is situate on the bank of the Monongahela river. These, together with Mapletown, Clarksville, Newtown, Mount Morris, Morrisville and Clinton, (towns of inferior grade, are all the villages in the county.

TAXABLES IN GREENE COUNTY.

TOWNSHIPS.	TAXABLES.		VOTES IN 1828.	
	1821.	1828.	Gen. El. Cong.	Electors
Cumberland,	303	357	247	247
Centre,	123	185	134	81
Franklin,	387	398	311	260
Whitely,	275	329	220	163
Dunkard,	259	235	175	176
Greene,	384	128	95	94
Jefferson,	246	232	163	185
Morgan,	398	290	157	172
Morris,	255	266	185	140
Wayne,	158	187	110	83
Rich hill,	129	151	110	100
Aleppo,	92	134	73	58
Monongahela, taken off Green and Dunkard since 1821,		223	172	191
	3009	3115	2152	1950

By the last census taken under the authority of the United States the total amount of population was

	15,554.
Slaves	7.
Free people of colour—Males	127.
Females	127.
	15,815

TAXABLES OF JEFFERSON CO. IN 1828.

Townships.	*Taxables.* 1828.	*Deaf & Dumb.*	*Votes at El. Elections.*	*Votes at General Elections.*
Pine Creek	48		27	24
Perry	88	3	22	36
Rose	123	1	65	66
Ridgway	26		16	19
Young	73		59	39
Totals.	358	4	189	184

In 1821, there were no commissioners in this county, therefore we have no list of that enumeration, but a list was taken and sent to Indiana. We have no Iron Works yet erected in this county, although it abounds with ore and good streams. The principal trade here is in lumber; there are usually from 18 to 20 hundred thousand feet of white pine boards, cut and rafted down the Big Mahoning, Red Bank, Toby and Tionesty creeks to the Allegheny; thence to Pittsburg, and down the Ohio to the different towns or cities. There is also considerable farming for a new settlement—the price of Iron here, is from six to seven cents per lb. We are not yet organized for judicial purposes, and have no public buildings, nor any public schools; but have our children taught at common schools. *Letter to the Editor.*

REPORT UPON AUCTION SYSTEM.

The Committee of Ways and Means, to whom were referred sundry memorials from various parts of the United States, praying the imposition of a tax upon Sales of Foreign Merchandise at auction, submit the following Report:

Aware of the deep solicitude which pervades a large portion of the commercial community on the subject referred to them, the Committee have bestowed upon it all the attention which this consideration, as well as the intrinsic importance and difficulty of the questions presented for their decision, so obviously demand. Several merchants of great respectability and intelligence, who were in attendance as delegates from New York, Philadelphia, Baltimore, and Alexandria, appeared before the committee, and stated the results of their experience and observation as to the injurious tendency of selling foreign merchandise at auction. They all concurred in the opinion that the existing system of auction sales furnishes great facilities for the perpetration of frauds upon the community, as well as upon the public revenue.

Whatever may be the frauds and impositions commited upon the community by means of this mode of selling merchandise, and however obvious the expediency of repressing these evils, the committee are unanimously of the opinion that the application of the remedy belongs exclusively to the State Legislatures. The whole subject of contracts and sales falls clearly within the province of the state legislation. Whatever form of sale a State may think proper to tolerate, and however imperfect the responsibility of sellers may be rendered by its legislation, Congress have no power to interpose, unless for the purpose of preserving from violation the laws of the Union, or for carrying into effect the powers granted to the Federal Government.

If, however, sales at auction are the means by which frauds are committed upon the revenue, and if they enable foreigners to enter their goods at the custom house at lower rates than the same quality and description of goods are habitually entered by American merchants, there can scarcely be a question, either as to the power or the duty of Congress to interpose its authority. This remedy, however, should have an appropriate and exclusive reference to the evil it is designed to correct.

A tax upon sales at auction would neither prevent the alleged frauds upon the revenue, nor the alleged advantage enjoyed by foreigners, unless it should amount to a prohibition, and even in that case it would be of doubtful efficacy.

As the Committee believe Congress has no power to act upon the subject, except with a view to preserve the revenue laws from violation, they have reported a bill prescribing certain regulations of sales of foreign merchandise, at auction, which, at the same time that it avoids the objections to which other remedies would be liable, will, it is hoped, go far to correct the evils of which the memorialists complain.

[The bill reported provides, that in all sales by auction of foreign goods, the invoice shall be produced, and that a schedule of the goods, with all the marks and particulars of importation, shall be published.]

Salmon.—The Susquehanna Emporium says, "For some weeks the good people of our town have been supplied with an unusual quantity of the choicest salmon, justly called 'king of the fresh water fish.' They either have not found the sluice of the Shamokin dam, or cannot stem the current, and are caught in immense numbers immediately below it in the Susquehanna.—Our fishermen have supplied the whole neighbourhood, and several of the finest specimens have been sent in boxes by the stage to Pottsville, Reading, and Philadelphia."

AUDITOR GENERAL'S REPORT ON BANKS.

The pamphlet report, on Banks, has been received, detailing at length their operations respectively; from which we have, with considerable labour, compiled the following table, which we think presents a more satisfactory view of the information contained in the report, than it gave in the form in which it was presented to the Legislature.

STATEMENT OF SUNDRY BANKS IN THE STATE OF PENNSYLVANIA,

ON THE FOURTH OF NOVEMBER, 1828, AS REPORTED TO THE LEGISLATURE ON THE FIFTH OF JANUARY, 1829, BY THE AUDITOR-GENERAL.

BANKS.	Capital.	Notes in circulation.	Due other Banks.	Deposits and Dividends unpaid.	Due commonwealth for tax.	Contingent, surpl's fund or profit and loss and suspense acc't.	Bills discounted and receivable.	Bonds, judgments, and mortgages, and collateral securities.	Stocks and loans to companies & securities and bills exchange.	Specie.	Notes of other Banks, or due by them.	Real Estate or Personal.	Dividend per year.
North America	1,000,000 00	244,526 61	64,978 27	433,984 48	2000 00	61,223 67	1,045,323 68	70,472 83	236,481 07	101,708 79	68,933 72	300,250 18	4½
Philadelphia	1,800,000 00	301,176 00	171,505 00	403,035 00	———	134,319 00	1,805,777 00	174,216 00	437,168 00	143,346 00	237,580 00	62,739 00	4½
Farmers & Mechanics	1,250,000 00	341,560 00	181,709 00	633,106 00	———	81,604 00	1,506,384 00	163,369 00	278,276 00	173,480 00	230,642 00	98,301 00	6
Commercial	1,000,000 00	193,484 00	60,252 81	267,431 59	3840 00	25,752 00	1,122,590 77	24,818 50	205,000 00	64,517 97	124,913 40	37,909 66	6
Mechanics	529,330 00	284,783 00	179,760 92	317,185 99	1431 34	73,715 63	959,327 87	———	12,164 76	110,995 41	148,977 24	45,776 97	9
Schuylkill	500,000 00	322,794 00	201,620 38	380,698 66	1400 00	66,246 62	923,981 06	———	32,808 50	109,584 38	356,476 18	49,909 60	6½
Northern Liberties	200,000 00	327,197 00	31,810 60	374,219 48	1600 00	79,641 19	732,660 33	17,427 80	20,000 00	84,218 64	150,161 50	10,000 00	10
Southwark	249,630 00	238,755 00	37,096 28	232,228 35	1900 00	12,946 45	635,404 35	———	———	96,223 19	40,928 46	———	9½
Kensington	92,740 00	137,315 00	14,630 00	106,579 24	695 10	14,022 66	282,233 68	———	———	36,743 51	42,604 43	3,548 50	9½
Penn Township	99,910 00	112,985 00	12,156 91	102,342 97	159 85	500 00	229,142 01	———	———	47,723 22	47,277 71	3,911 79	4
	6,721,610 00	2504575 61	955,520 17	3250811 76	13026 29	549,971 22	9,242,824 75	450,304 13	1321898 33	968,541 11	1448494 64	612,346 70	
Germantown	129,500 00	61,067 00	2,035 07	93,328 20	621 60	24,888 12	251,095 26	22,185 99	1,060 00	22,808 53	7,012 21	6,910 00	6
Harrisburg	158,525 00	594,315 94	60,273 18	249,022 91	1014 56	14,138 86	428,463 45	15,949 86	50,360 00	112,191 50	425,156 18	45,169 46	8
Pittsburg	346,155 50	390,790 00	14,536 60	237,851 91	1658 25	62,153 76	703,393 68	7,965 43	90,911 28	29,391 44	216,202 09	5,282 04	6
Farmers of Lancaster	400,000 00	181,138 00	12,719 60	123,024 76	1245 52	1,813 73	494,172 86	2,766 50	82,960 25	56,487 49	40,746 13	39,360 12	4
Lancaster B.	134,235 00	140,545 00	4,587 06	36,980 02	410 50	11,860 45	202,601 07	13,160 00	28,520 00	20,250 55	40,767 37	23,319 04	2⅔
Columbia Bridge Compy.	395,000 00	139,971 36	20,404 66	42,744 79	1047 13	1,130 87	143,357 30	24,179 60	104,818 57	45,174 57	27,925 13	254,843 64*	5
Farmers B. of Reading	300,350 00	184,715 00	3,180 00	86,005 44	778 46	———	374,797 38	37,205 84	82,374 00	25,028 37	36,852 36	18,770 95	5
Chester County	90,000 00	221,621 00	9,417 72	222,488 69	720 00	45,949 01	291,270 87	42,920 62	163,000 00	61,195 64	24,696 93	5,163 00	10
Delaware County	77,510 00	76,632 00	453 17	83,301 32	———	9,884 53	53,096 02	124,520 00	13,523 37	34,654 34	57,716 69	16,070 90	8
Montgomery County	133,250 00	149,170 50	200 00	105,007 47	533 00	11,732 70	139,085 26	65,450 90	130,541 25	31,066 18	14,995 12	18,755 06	5
Easton	181,140 00	289,311 33	2,309 40	146,134 58	1449 12	39,815 37	427,082 63	54,586 20	76,869 80	37,930 91	63,690 26	———	5
York	168,720 00	109,570 00	24,983 26	148,204 77	944 84	5,445 88	255,381 16	18,064 74	30,300 00	128,622 11	25,500 74	10,370 80	7
Northampton	112,500 00	310,897 00	6,826 00	50,956 62	525 17	11,384 78	129,514 73	157,260 00	119,257 30	28,128 09	25,691 76	33,119 81	7
Carlisle	168,230 00	139,810 00	11,024 80	56,953 03	928 73	3,969 68	278,030 00	2,000 00	3,700 00	32,353 99	43,791 42	21,040 78	7
Chambersburg	246,651 67	213,515 00	14,862 51	51,519 76	1183 92	6,011 65	263,861 04	128,175 72	48,650 13	17,184 00	18,162 29	38,075 78	6
Gettysburg	125,298 00	76,275 00	20,700 35	23,820 66	501 19	1,017 47	114,129 35	56,004 21	1,722 05	29,455 49	6,433 58	38,860 50	5
Monong. B. of Brownsville	102,123 00	144,935 00	1,418 50	48,061 74	531 03	6,752 33	151,464 90	32,610 45	2,412 00	20,214 23	72,377 31	24,742 71	6½
Westmoreland	112,783 00	181,955 00	5,531 89	40,308 82	541 35	4,493 47	236,957 29	60,000 00	———	25,423 21	64,733 03	17,850 00	—
Farmers of Bucks County	60,090 00	75,756 00	3,413 63	38,880 89	103 06	4,970 70	86,398 78	682 89	12,807 65	9,304 35	30,949 46	———	3
19 country banks—Totals	3,442,061 17	3681990 13	218,877 40	1884596 38	14737 43	267,403 36	5,024,153 03	865,688 95	1043787 65	766,864 99	1243400 06	617,704 72	
10 city do. do.	6,721,610 00	2504575 61	955,520 17	3250811 76	13026 29	549,971 22	9,242,824 75	450,304 13	1320898 33	968,541 11	1448494 64	612,346 70	
Grand Totals	10163671 17	6186565 74	1,174397 57	5135408 14	27763 72	817,374 58	14266977 78	1315993 08	2364685 98	1735406 10	2691894 70	1230051 42	

* Of this sum the cost and repairs of the Bridge form $237,533 83

ADAMS COUNTY, Pa.

Mr. Samuel Hazard,

Dear Sir,—The plan adopted by you in the publication of your interesting periodical. appears to me so well calculated to prove useful and interesting to the public generally, and more particularly so to the citizens of Pennsylvania, that I do most cheerfully tender all the aid which it may be in my power to bestow, towards the fund of information which you are endeavouring to collect from the different sections of the state; for record in your Register. In offering my services on this occasion, I can promise no more than a simple statement of such facts, historical and miscellaneous, relative to this county, as my limited means of information have enabled me to gather, leaving to you the task of arranging & putting into a suitable dress, such loose remarks and crude matters of information as you may find in the present communication.

The County of Adams, although not now, strictly speaking, in its infancy, may yet be considered one of the younger branches of the parent stock—having taken its name and stand amongst its sister counties in the year 1800. It originally formed a part of York county, which borders it upon the east, and which, previously to that period, embraced a large extent of territory. This, indeed, was the case with nearly all of the old counties in the state, for, before they were curtailed in their dimensions by the creation of new counties amongst them, many of them embraced double the extent of territory which they now occupy. Such has been the rage for dividing and sub-dividing the state domain, that it may be truly said, that justice has been brought to every man's door. Whether the rise of new counties upon the territory of the old, has generally contributed to the wealth and prosperity of the whole, I cannot pretend to say; but if I were to draw my conclusions from facts deduced from the present attitude of our own county, I might venture the opinion, that the act of separation has been, as in the present instance, highly advantageous to the seceding party. I believe that Adams county at least, has gained by the measure; although it is possible that her neighbour York may yet have reason to mourn for the loss of so considerable a portion of her estate. This is, however, nothing to the purpose, and may be left for a solution, to better politicians than your correspondent professes himself to be.

Adams County is bounded on the east by York and part of Cumberland counties, on the north by Cumberland and part of Dauphin, on the west by Franklin co. Pa. and part of Washington co. Md. and on the south by Frederick co. Md. and part of York co. Pa. Its average extent from east to west is miles, and from north to south miles. Its western and southern boundaries are traversed by the first range of mountains west of the Susquehanna, usually called the South Mountain or Blue Ridge. It embraces no navigable waters, although it is crossed, in various directions by a number of small, valuable streams, affording a considerable amount of water power, and furnishing a number of scites for saw and grist mills, of which there are a sufficient number for the accommodation of all our citizens. For want of opportunity of ascertaining their number, I am not able to state how many of them are in operation in the county. There are eight or ten carding and fulling mills scattered through the county, all of which are in full operation. They are however, upon a small scale, although their products and manufactures are considered of an excellent quality. The county is interspersed with a number of small towns and villages, amounting to 14 or 15. There are few of your readers who do not know what a Pennsylvania village is—those who have travelled through the interior of the state, can easily embody the picture in their minds—they are generally located at some point where two or more public roads cross each other, there are many indeed, which have hardly a "local habitation or a name," being in many respects any thing but what, in the common meaning, a village is, or what, for all intents and purposes, it ought to be, to entitle it to the appellation. The writer of this, in the course of travel through the state, has often had his expectations in this particular, most grievously disappointed. Every public thoroughfare has its range of villages scattered along the road, at irregular distances, according as fancy or convenience might dictate their location; and every observant traveller, at least makes it his business to learn, when upon the road, the name and other particulars of the several towns through which he will have to pass in the course of his journey. "Full many a time and oft," however, have I been deceived in my anticipations; for often it has happened, that after picturing to my imagination some neat, handsome, regular and well built town, in some "lonely auburn of the plain," I have at last not been able to identify and know it, even when in the heart of the village. It seems that a village is rather a loose term, for it as often represents a spot where two or three miserable dwellings are scattered over the plain, as when regular streets and well built houses bespeak the congregated multitude. The three indispensables, of a tavern, a store, and a blacksmith-shop, often compose the sum total of a Pennsylvania village.

I am, however, wandering from my subject; I do not wish it to be understood that *all* of the villages of Adams county partake of the character of those just described, although it must be confessed that there are a few of them, that would not be misrepresented by the sketch. For instance, *Cash town*, *Borough town*, *Mummasburg* and *Heidlersburg*, neither of which, it will be generally admitted, possess much more than the three requisites before stated, with which to support their name and standing amongst the villages that surround them. There are however, others of better pretensions, which may claim some passing notice, viz. *Berlin*, *Abbotts town*, *Petersburg*, (in the immediate vicinity of the York Springs,) *Littles town*, *Millers town*, *Oxford*, *Hunters town*, and a few others. The York Springs are situated in this county, within thirteen miles of the town of Gettysburg, the seat of justice for the county, and on the turnpike road leading from Baltimore to Carlisle. They are not so much patronized as formerly, although they are still visited during the season, by many from the cities of Baltimore and Philadelphia, and from the interior—they are at present kept by Mr. James M'Cork. I am sorry that I have it not in my power to furnish an analysis of their waters. Their medicinal properties have been highly extolled, particularly for their efficacy in cases of debility of constitution. They are generally known by the name of "Sulphur Springs," probably in consequence of sulphur being the predominating ingredient. The buildings attached to them are spacious and the accommodations unexceptionable.

The soil of the county, generally speaking, is of a medium quality, although it embraces a large quantity of land which may be considered as equal to any in the state. The system of farming here has not yet reached so near a state of perfection as in some of the adjacent counties, and this, in some measure, may be considered as a reason why the agricultural interest stands lower here than it otherwise would do if such improvements as have taken place in other counties were introduced into our own. One of the peculiar characteristics of the citizens of this county is an attachment to old habits and forms, and unfortunately for their own interest, they have permitted this love and partiality for old customs, and consequently prejudice against innovations of any kind, to influence them so much as to dispose them to reject many improvements calculated to prove advantageous and salutary in their operation. The city of Baltimore is the nearest market for the products of our soil, the average distance being about sixty miles. The main productions are wheat, rye, corn, barley, oats, &c., in addition to which a large quantity of pork is annually hauled to said city for sale. The county is

connected with Baltimore at different points by two turnpike roads passing through it.

Gettysburg, the Seat of Justice for the county, is a brisk and pleasant town, containing about 1500 inhabitants, who are principally engaged in mechanical pursuits. It stands in an elevated situation, upon a point of ground where the Philadelphia and Baltimore turnpike roads meet in their course to Pittsburg, at the distance of 114 miles from Philadelphia, and 52 from Baltimore. By means of its location, it enjoys a considerable share of the travelling between those cities and the west. At the last session of the Pennsylvania Legislature, a subscription of $20,000 towards the stock of a company for making a turnpike road from Gettysburg to Hagerstown in Maryland was granted, but in consequence of not succeeding in obtaining subscriptions for the balance of the stock necessary to the construction of the road, nothing has been done towards the accomplishment of this desirable work. This road would connect Philadelphia and Wheeling by a continuous turnpike, and in the opinion of all acquainted with the subject, would greatly promote the interests of Philadelphia. The distance to turnpike would be about 32 miles.

Gettysburg was laid out some few years before the organization of the county by Mr. James Gettys, now deceased, and is at this time considered, in point of external appearance and otherwise, inferior to few towns in Pennsylvania of the same size. There are few places within the state embracing more intelligence amongst its citizens, and in which the moral and social feelings are more sedulously cultivated. It may be remarked by the way, that at least in one of the foregoing characteristics, a salutary reform has taken place within a period of ten or twelve years past. Perhaps one of the best influences in insuring at least a continuation of this state of things, will be the location of the Theological Seminary of the Lutheran Church in the United States, in this town. This institution commenced its operations here between two and three years since, and is at this time in the full tide of successful experiment. It is at present under the immediate superintendance of Professor Schmucker, well known as a gentleman of high literary attainments, and as possessed of superior qualifications as a professor and divine. It is contemplated to establish a second professorship.

The public buildings are a court house, situated in the centre of the town square, an academy, a gaol, a bank, a building for the use of the county offices, and four churches; two belonging to Presbyterian, one to the Methodist, and one to the German Lutheran societies. Their pulpits are respectably filled. Of stores there are nine, taverns seven, drug stores, two, &c. &c. The town is supplied with good water by means of pipes leading from a spring within its limits, We are not at a loss for gentlemen of the liberal professions. In addition to five or six divines, we have a bar embracing 8 or 10 members in regular gradation as to practice and standing, and 5 physicians, all respectable in their profession. We have also three newspaper establishments, one of them German, and the other two English—the two latter, by the bye, always contriving to be at dagger's points in every political engagement. The town is famed for the manufacture of carriages of every description, from the large ponderous mail stage, down to the light and easy sulkey. It is supposed, that including all the workmen engaged both remotely and immediately in this business, there are not many less than sixty or eighty hands employed in this branch of manufacture alone.

The population of the county at this time is supposed to be about 22,000. The number of taxable inhabitants embraced within its limits, from an enumeration recently made, is ascertained to be 4192. "Maria Furnace, lately established by Messrs. Stevens and Paxson, at the distance of eight or ten miles from Gettysburg, although yet in its infancy, is likely to prove a valuable concern to this section of the county. It is situated near the foot of the mountain near the south-west end of the county.

I have thus given some details respecting this county; they may be in some instances imperfect, being the fruit of limited means of information; yet I may tender them to you as tolerably correct in the general outline. The foregoing sketch has been drawn up in haste, and may not stand the test of criticism on the score of propriety of style, or of grammatical precision, but such as it is, is offered by the writer, out of a sincere desire to promote the objects aimed at in your periodical—the dissemination of useful information from every section of the state. CIVIS.

Gettysburg, Jany. 1829.

The Pittsburgh Gazette says, "Capt. Baker, the present commandant of the U. S. Arsenal, an enterprising and prudent public agent, has been the first to introduce steam power at the ordnance shops. Here was the government, until this late day, using the clumsy, troublesome, irregular, and expensive horse power, surrounded with steam engines, and overlooked by coal pits. The steam engine is one of fifteen horse power; it was made and set up by Pratt, and is a sample of the work done uniformly so well and so cheap in this city. It is employed in polishing arms hauled there from the Armory on the Potomac; and with more spare power, it could manufacture as well as polish them, 20 per cent. cheaper than they cost when made at Harper's Ferry and carried to this depot."

The plan for introducing water into Pittsburg has been completely successful; a large body having been thrown into the reservoir, and thence conducted through the city in pipes.

We have received the able, and to us very satisfactory, report of the Committee on Roads, &c. presented by Mr. Duncan, its chairman, on granting the request of the Baltimore and Susquehanna Rail Road Company, and regret that it came to hand after our paper was made up, so that we are obliged to defer its publication to the next number. If the open avowal of the committee themselves, that the great object of the road is to withdraw from Philadelphia a great portion of its internal commerce, and if the facts that Baltimore offers no advantages as a market over Philadelphia—that all the tolls, which will be derived from that road, will consequently be diverted from the state—that Philadelphia furnishes a large revenue to the state, which will be augmented as its internal trade increases—and that she has always furnished, and is still able and willing to furnish, a large capital for the prosecution and completion of the great public works already commenced—If all these be not arguments sufficient to prove the impolicy of granting the request, we are at a loss to know what others will produce that effect.

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